

## Factors Influencing Smoking among School Children

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### Abstract

**Introduction:** Smoking is the single most preventable health risk and important cause of premature death worldwide. According to WHOM about one third of entire population of the world are smokers. **Objective:** To determine the risk factors of influencing smoking among schoolchildren in Dhaka city. **Material & Methods:** This cross sectional study was conducted in high schools of Dhaka city during June 2006 to December 2006. Students of class VIII, IX, X and 12 schools were selected by random table selection. A total of 2474 participants were included for the study. The collected data were analyzed by using Statistical package for Social Science (SPSS-24) programme for windows version 10.0. **Results:** Age of the study children was between 12 to 18 years. Male and female students were 1876 (75.8%), 598 (24.2%) respectively. Among 1950 male students 702 (36.0%) were smoker and 524 female students 90 (17.0%) were smoker. Five hundred and four (63.6%) started their smoking due to curiosity, 184 (23.2%) started smoking because their friends also do smoke, 40 (5%) smokers smoke because their father smoke. Friends know about smoking in 545(68.2%) cases, near relatives in 33 (4.2%) cases, mothers in 47 (6.0%) cases and father in 15 (2%) case. Eighty-one (10.4%) students smoke to get friends cooperation and 183 (23%) students smoke to be more acceptable to his or her friends. 573 (72.8%) were willing to leave smoking because smoking was injurious for health. **Conclusion:** It has been identified that friends influence, curiosity and a belief that 'smoking relieves anxiety' played a major contributory role in initiation of smoking. Adolescents should be careful in selecting friends, as friends influence is the prime initiator of smoking behavior.

**Keywords:** Smoking, Factors, Influencing, Adolescence, Tobacco, Children.

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### I. INTRODUCTION

Smoking is the single most preventable health risk and important cause of premature death worldwide. According to WHOM about one third of entire population of the world are smokers. Early age of initiation is a significant risk factor for long-term dependence of smoking and may relate to other unhealthy behaviors [1]. Adolescence tobacco uses have been found to be a major predictor of future use. In Bangladesh, the Bureau of Statistics conducted a survey on 'information on smoking' during July 1997. It reveals that smoking habits increase with the advancement of age. Among male it was 2.8% at age of 10-14, 14.4% at age of 15-19 and 70% at age of 35-49 years [2]. A cross sectional school based survey was conducted among 282 students of Gambia aged 14-18 years and recognized that variables associated with

smoking behavior were greater intention on smoke in future [3]. Study findings show significant relationship between the presences of a smoker in the family and picking up the habit [4]. It is predicted that during the first quarter century, the number of smokers will increase by a half billion, and number total tobacco related deaths will more than triple to 10 million, with developing countries suffering the greatest impact[5]. Prolong smoking is a leading behavioral cause of premature mortality and disability (WHO, 1999). The higher death rate among smokers is related to the number of the cigarettes smoked, the age at initiation and the degree of inhalation. A smoker doubles his risk of dying before the age of 65[6]. Prolonged cigarette smoking is estimated to cause premature death in one of every two smokers. This corresponds to approximately one of every five deaths each year [7]. The mean

survival of smokers was 7.5 years shorter compared to non-smokers and the decrease in survival was dose-dependent. At the turn of the century, the anti-smoking movement in the United States was motivated mainly by moral and religious beliefs. Medical and scientific data implicating smoking as a cause of cancer first began in Germany in the 1920s and 1930s. However, it was largely ignored because of the Second World War. It was not until the early 1950s and 1960s when scientists from United Kingdom and United States began to publish their research linking smoking and cancer that the modern era of tobacco control was born [8]. Smoking has many health hazards with immediate and long-term morbidity and mortality. Peer pressure, general stress and media are influences for smoking. Adolescence tobacco use has been found to be major predictors of future use; therefore, preventive measures should be started in this age group. If we can focus the prevalence of smoking in our country, then appropriate measures can be started in this age group to stop smoking for longer period. In addition, as a role long term morbidity and mortality related to smoking can be prevented.

### III. METHODOLOGY AND MATERIALS

This cross sectional study was conducted in high schools of Dhaka city during June 2006 to December 2006. 12 schools were selected by random table selection. A total of 2474 participants were included for the study according to following inclusion and exclusion criteria. The aim of the study was to determine the risk factors of influencing smoking among school children in Dhaka city. The selected students filled up a questionnaire, which includes age of initiation of smoking, place of smoking, and informed persons about smoking, how interest of smoking developed, source of money, willingness to leave smoking, whether smoking within last 7 days before interview and other relative information. The collected data were analyzed by using Statistical package for Social Science (SPSS-24) programme for windows version 10.0.

#### Inclusion Criteria

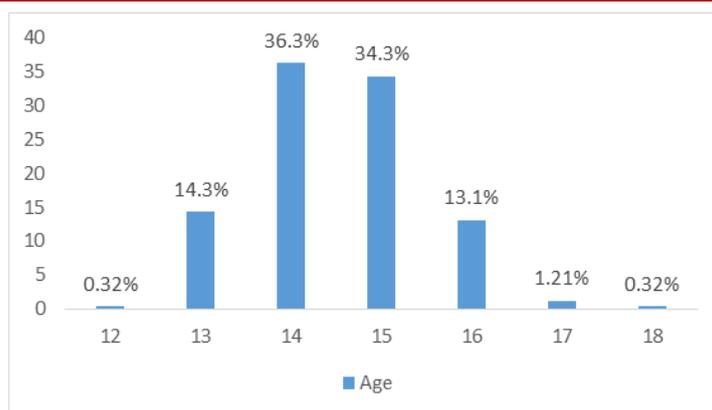
- Students of class VIII, IX, X
- Boys and girls
- Willing to participate in the study

#### Exclusion Criteria

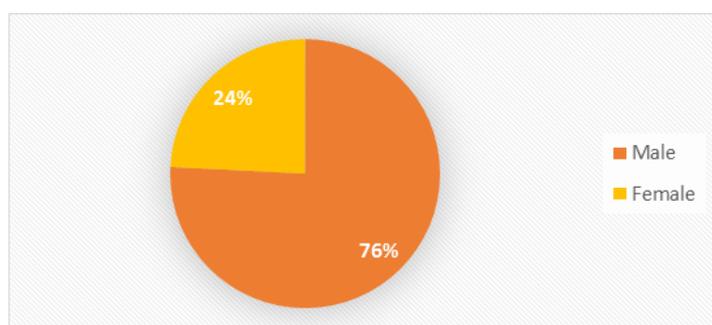
- Incompletely filled up data were excluded from the study.
- Those student were absent during collection of data.

### IV. RESULTS

Age of the study children was between 12 to 18 years. Among the study children, 8(0.32%), 354(14.3%), 900(36.3%), 850(34.3%), 324(13.1%), 30(1.21%), 8(0.32%) belonged to 12, 13, 14, 15, 16, 17, 18 years of age respectively (Figure I). Male and female students were 1876 (75.8%), 598 (24.2%) respectively (Figure II). Among 1950 male students 702 (36.0%) were smoker and 1248 (64.0%) were non-smoker. Among 524 female students 90 (17.0%) were smoker and 434 (83.0%) were non-smoker. Prevalence of smoking among male and female students was 36.0% and 17.0% respectively (Table I). Among the smokers 512(65.0%) smoked once in their life, 248(31.0%) occasionally. Only 32(4.0%) students were regular smoker. Although the prevalence were 32.0%, only 4.0% of the students are regular smoker combining boys and girls together (Table I). Out of 792 smokers 160(20.2%) initiated at the age of 12 years, 155 (19.5%), 216 (27.3%), 3 (0.3%) respectively at 13, 14, 17 years started their first smoking (Table II). Five hundred and four (63.6%) started their smoking due to curiosity, 184 (23.2%) started smoking because their friends also do smoke. 40 (5%) smokers smoke because their father smoke (Table III). Friends know about smoking in 545(68.2%) cases, near relatives in 33 (4.2%) cases, mothers in 47 (6.0%) cases and father in 15 (2%) case (Table IV). Eighty-one (10.4%) students smoke to get friends cooperation and 183 (23%) students smoke to be more acceptable to his or her friends. 444 (56%) of smokers started smoking as curiosity (Table V). Tiffin money contributed in 207 (26.1%) cases as a source of money. Pocket money, friends money, travel allowance were also observed as source of money for smoking in 65 (8.2%), 108 (13.6%), 87 (11%) respectively (Table VI). Out of 792 students, only 06 (0.76%) did not want to leave smoking and 786 (99.24%) want to leave smoking (Figure III). 573 (72.8%) were willing to leave smoking because smoking was injurious for health, 168 (21.2%) were willing to leave smoking because of mistake themselves and 51 (6.4%) were willing to leave smoking because of parents pressure (Figure IV).



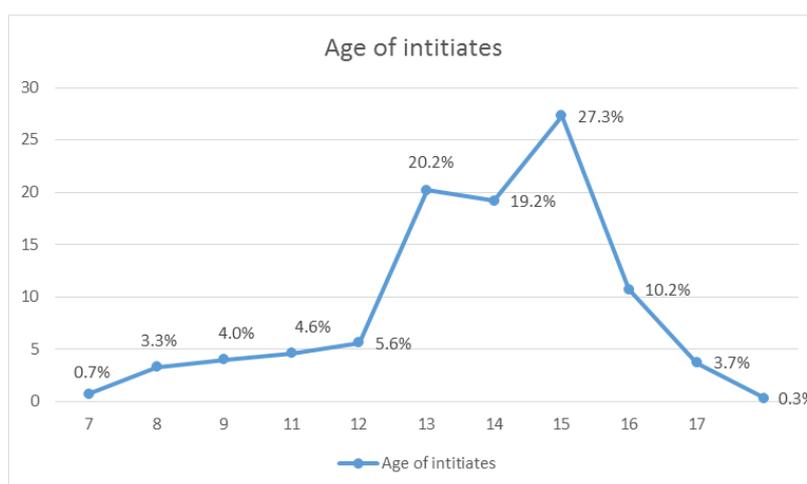
**Fig-I: Age distribution of the study children (n=2474)**



**Fig-II: Sex distribution of the respondents**

**Table-I: Male and Female smokers**

	Male (n=1950)	%	Female (n=792)	%
Smoker	702	36.0	-	-
Non smoker	1248	64.0	-	-
Regular	-	-	32	4.0
Some times	-	-	248	31.0
One time	-	-	512	65.0



**Fig-III: Age of initiation**

**Table-II: Factors that initiates smoking (n=792)**

Factors	No. of the respondents	Percentage
Curiosity	504	63.6
Friend	184	23.2
Father	40	5.0
Mother	3	0.4
Cinema	6	0.8
Drama	4	0.5
Others member	51	6.4

**Table-III: Informed persons about smoking (n=792).**

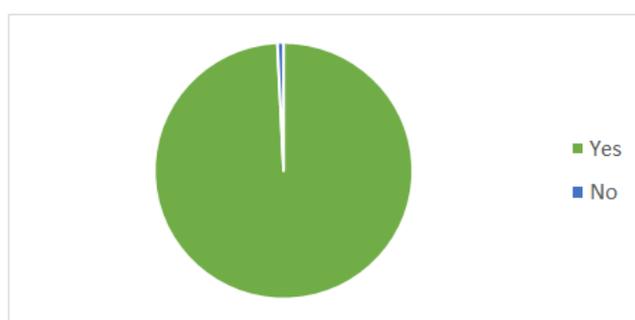
Informed person	No. of the respondents	Percentage
Father	15	1.9
Mother	47	5.9
Friend	545	68.2
Teacher	6	0.7
Relative	33	4.2
Others	146	18.4

**Table-IV: Reasons for smoking (n=792)**

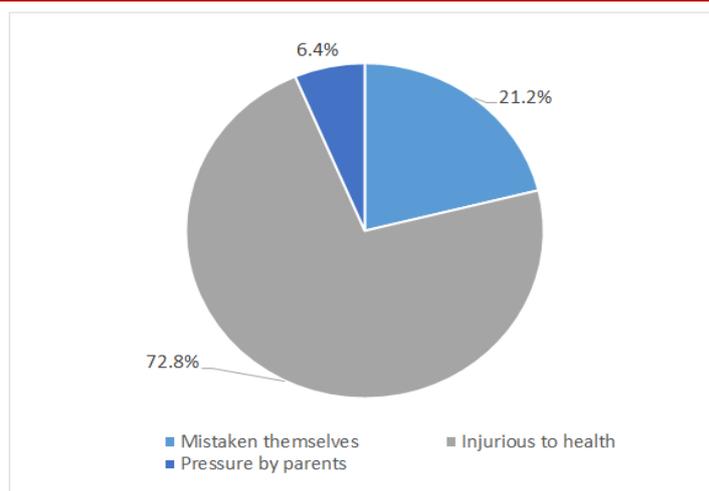
Reasons	No. of the respondents	Percentage
Curiosity	444	56
Lessen anxiety	24	03
Inspiration of reading	36	4.6
Self-dependent	24	03
Friends cooperation	81	10.4
Acceptance of friend	183	23

**Table-V: Source of money for smoking (n=792)**

Source of money	No. of the respondents	Percentage
Pocket money	65	8.2
Tiffin money	207	26.1
Travel allowance	87	11
Friends money	108	13.6
Sharing with others	20	2.5
others	305	38.5



**Fig-III: Smokers willing to leave smoking**



**Fig-IV: Reasons to leave smoking**

## V. DISCUSSION

In this study, age of the study children was between 12 to 18 years. A prevalence study in 1979, conducted among 13,887 students aged 10-16 years, in the two largest cities Dhaka and Chittagong reported 12.2% current smokers and 2.9% ex-smokers. Prevalence increased with age up to 23.3% among the 15-16 age groups. In our study, male and female students were 1876 (75.8%), 598 (24.2%) respectively. In this study, 32.0% were male smoker and 17.0% were female smoker. A case-comparison study was conducted in Bangladesh among teenagers of metropolitan high school and males residing in urban slum age group 12-20 years of Dhaka city in 1991. Concerning the habit of smoking out of 792 smokers, only 32 (4.0%) students were regular smoker, they smoke this very small figure on regular basis. Current smoker is 92 (11.6%) whereas ever smoker is 700 (88.4%). In this study, smoking initiation was detected from as low as 7 years of age. Out of 792 smokers 160(20.2%) initiated at the age of 12 years, 155 (19.5%), 216 (27.3%), 3 (0.3%) respectively at 13, 14, 17 years started their first smoking. Five hundred and four (63.6%) started their smoking due to curiosity, 184 (23.2%) started smoking because their friends also do smoke. 40 (5%) smokers smoke because their father smoke. Early age of initiation is a significant risk factor for long-term dependent smoking and may relate to their unhealthy behaviours[1]. Age of initiation of smoking at the age of 8.5 years in a school base survey conducted in USA in 1999 [9]. A case comparison study [9] conducted in Bangladesh suggests smokers had been influenced to take up smoking by the smoking behavior of peers and parents, peers were more important for the students. Major influence on initiation of smoking was found friends in a survey conducted among medical college student in Pakistan [10]. Most teens smoked usually out of curiosity [11]. A cross sectional study among 257 teachers from 30 schools also revealed that the curiosity (37.9%) as priority one initiating factors of smoking initiation [12]. Research findings from Taiwan indicate that most students started

smoking because of curiosity [12-14]. Research on adolescent smoking suggests that for beginning smokers, curiosity, and peer influence were the most frequently given reasons for smoking [15]. Varying degrees of parental, family members and friends influence on smoking initiation was observed. Again age at initiation of smoking was earlier among those adolescents who used to get cigarettes from their smoker friends. In present study, friends influence, however, has been identified as an important factor in initiation of smoking among adolescents. Smoking initiation was detected from as low as 7 years of age. Age related progression of smoking was well marked. It has been identified that friends influence (23.3%), curiosity (63.3%) and a belief that ‘smoking relieves anxiety’ (03%) played a major contributory role in initiation of smoking.

## VI. LIMITATIONS OF THE STUDY

The present study was conducted in a very short period due to time constrain and fund limitation. Small sample size was also a limitation of the present study.

## VII. CONCLUSION

Smoking initiation was observed from as low as 7 years of age and age related progression of smoking was well marked. It has been identified that friends influence, curiosity and a belief that ‘smoking relieves anxiety’ played a major contributory role in initiation of smoking. Adolescents should be careful in selecting friends, as friends influence is the prime initiator of smoking behavior. The parents while issuing daily pocket money should make based assessment of the need carefully. Adolescents should not be allowed to buy cigarettes for parents or family members.

## VIII. RECOMMENDATIONS

School-based smoking prevention programmes should be organized. Future anti-smoking campaign should aim at how to remove curiosity towards smoking

and belief that ‘smoking relieves anxiety’ from the curious and anxious mind of the adolescents.

#### Funding

No funding sources.

#### Conflicts of Interest

The authors state that the publishing of this paper does not include any conflicts of interest.

#### Ethical approval

The study was approved by the informed consent of the participant.

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